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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,991	12/13/2001	Menachem Rafaclof	8033045	4976

7590 10/15/2003

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EXAMINER

TAMAI, KARL I

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 10/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,991	RAFAELOF, MENACHEM	
	Examiner	Art Unit	
	Tamai IE Karl	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4/8/02</u> . | 6) <input type="checkbox"/> Other: _____ |

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as spelling errors "curvilneal" on page 4, line 19.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the herring bone pattern on the rotor and on the stator must be shown or the feature canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Otsuka et al. (Otsuka)(JP 08-033,360). Otsuka teaches a magnetic disc storage unit with a rotor having electrodes 32 and the stator having electrodes 34 driven by a voltage source 37. Otsuka teaches the electrodes providing opposing bearing surfaces. The electrodes inherently spaces apart by 1-5 microns.

6. Claims 1, 4, 7, 8, 9, 10, 11, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tanaka et al. (Tanaka)(JP 08-029556). Tanaka teaches an electrostatic motor with a rotor having electrodes 35 and the stator having electrodes 25 driven by a voltage source 37. Tanaka teaches a rotor with a bearing ring/dimple rotating about a shaft/nub with oil lubricant (dielectric constant inherently greater than 1).

7. Claims 1, 4, 7, 11, and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Howe et al. (Howe)(US 4943750). Howe teaches an electrostatic motor with a rotor having electrodes 17 and the stator having electrodes 27, 29 driven by a voltage source.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6, 12, 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (Tanaka)(JP 08-029556) and Kusaki (JP 06-021532). Tanaka teaches every aspect of the invention except the herring bone dynamic pressure bearing. Kusaki teaches a herring bone dynamic pressure bearing on the inclined surface 2a for a micromotor (see figures 4 and 5). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Tanaka with the herring bone bearing of Kusaki to provide a stable bearing in the axial and radial directions.

10. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (Tanaka)(JP 08-029556) and Kusaki (JP 06021532), in further view of Mizoshita et al. (Mizoshita)(US 5793560). Tanaka and Kusaki teach every aspect of the invention except the rotor being a disc media. Mizoshita teaches the rotor being a disc media (Figure 23). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Tanaka and Kusaki, with the rotor being a disc media to store magnetic information as taught by Mizoshita.

11. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (Tanaka)(JP 08-029556) and Kusaki (JP 06021532), in further view of Howe et al. (Howe)(US 5,043,043). Tanaka and Kusaki teach every aspect of the

invention except the spacing between the mover and stator being 1-5 microns. Howe teaches the gap between the rotor and stator being 1-5 microns. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Tanaka and Kusaki to with the gap between the rotor and stator being 1-5 microns because Howe teaches it is the preferred gap in microractuators to provide a strong electrostatic field in the microactuator.

12. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (Tanaka)(JP 08-029556) and Kusaki (JP 06021532), in further view of Zedekar et al. (Zedekar)(US 5173797). Tanaka and Kusaki teach every aspect of the invention except the grooves on the rotor instead of the stator. Kusaki teaches the grooves on the rotor or the stator. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Tanaka and Kusaki with the grooves on the rotor because it is within the ordinary skill in the art to choose between known equivalents.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (US 6017150) teaches the equivalence of air and oil as the dynamic pressure fluid (col. 4, line 30). Lee teaches the grooves being herring bone. Asai et al. (US 5129739) teaches that the fluid can be oil, grease, water, or air.

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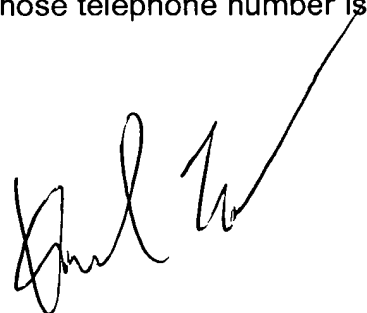
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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
September 23, 2003

A handwritten signature in black ink, appearing to read 'Karl I. Tamai', is written over the printed name and title.

KARL TAMAI
PRIMARY EXAMINER